

THE EXECUTIVE WHO STOPS TO THINK . . .



Knows that "10% for War Bonds isn't enough these days"

Workers' Living Costs going up . . . and Income and Victory Tax now deducted at source for thousands of workers . . .

Check! You're perfectly right . . . but all these burdens are more than balanced by *much higher FAMILY INCOMES for most of your workers!*

Millions of new workers have entered the picture. Millions of women who never worked before. Millions of others who never began to earn what they are getting today!

A 10% Pay-Roll Allotment for War Bonds from the wages of the family bread-winner is one thing—a 10% Pay-Roll Allotment from each of several workers in the same family is quite another matter! Why, in many such cases, it could well be jacked up to 30%—50% or even more of the family's *new money!*

That's why the Treasury Department now urges you to revise your War Bond *thinking*—and your War Bond *selling*—on the basis of *family incomes*. The current

War Bond campaign is built around the family unit—and labor-management sales programs should be revised accordingly.

For details get in touch with your local War Savings Staff which will supply you with all necessary material for the proper presentation of the new plan.

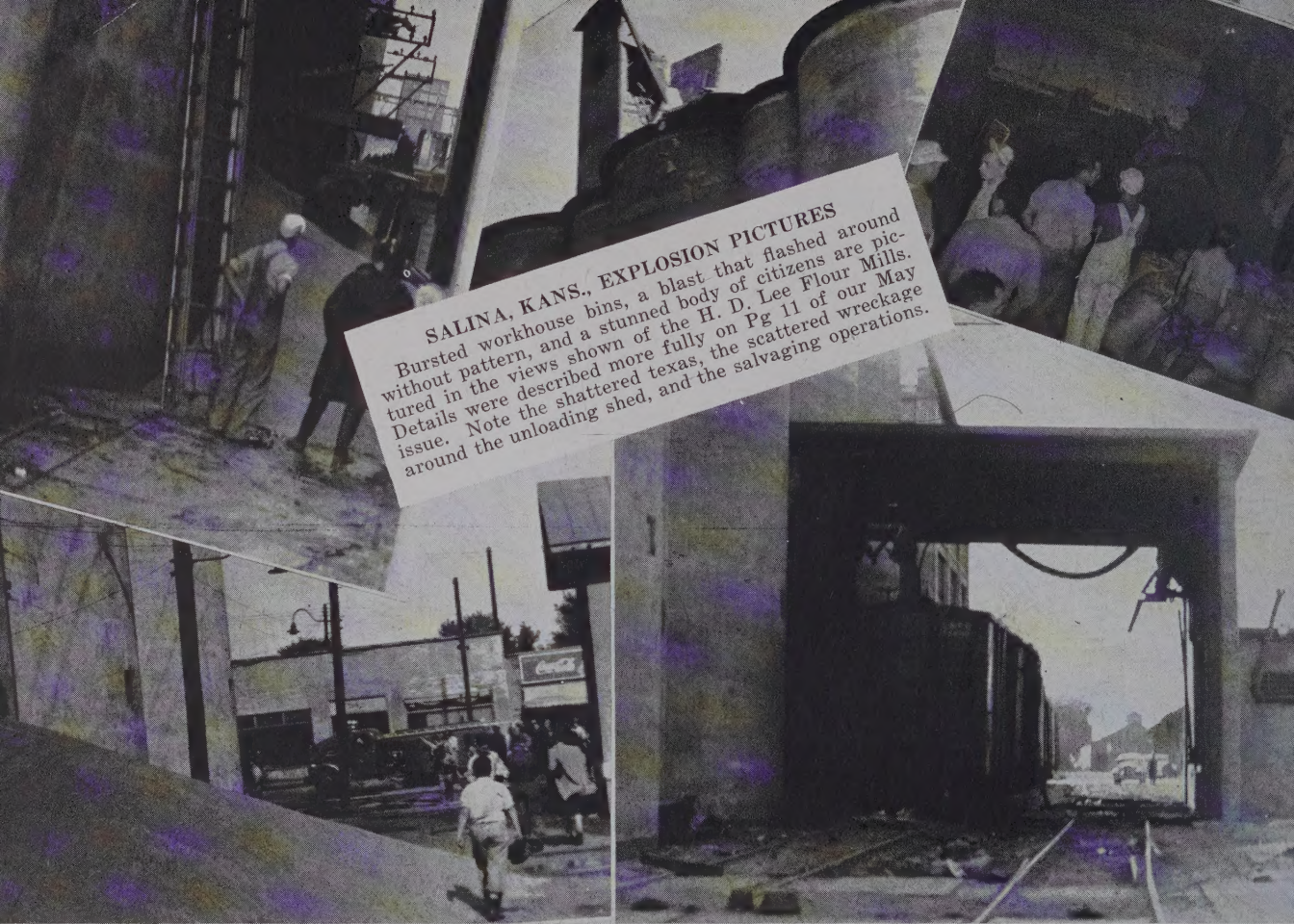
Last year's bonds got us started—*this year's bonds are to win!* So let's all raise our sights, and get going. If we all pull together, we'll put it over with a bang!

you've done your bit
... now do your best!

★ ★ ★ ★ ★ ★ ★ ★

Grain

JULY, 1943



SALINA, KANS., EXPLOSION PICTURES
 Burstured workhouse bins, a blast that flashed around without pattern, and a stunned body of citizens are pictured in the views shown of the H. D. Lee Flour Mills. Details were described more fully on Pg 11 of our May issue. Note the shattered shed, the scattered wreckage around the unloading shed, and the salvaging operations.

BLOWUP IN RYE UNIT

A dust explosion in the rye unit of the Eagle Roller Mill, New Ulm, Minn., resulted in a fire. Overhead sprinklers and the fire department brought the blaze—which occurred on the top floor of the big mill—under control. Considerable water damage was added to the explosion and fire loss.

SOYBEAN DUST IGNITES

Soybean dust at the Buckeye Cotton Oil Co. plant, Louisville, Ky., ignited and illuminated the sky for a considerable radius on July 8th. Firemen claim machinery sparks ignited the dust.

AGREES ON THREATENING TREND

Your May issue is particularly interesting to me because of the several reports on recent explosions and fires. As indicated in the article on Pg. 8, a record of some kind will be made if losses continue at the present rate.—Hylton R. Brown, Senior Engineer, Bureau of Mines, U.S.D.I., College Park, Md.

BLOWTORCH IGNITES DUST

A welder's torch is thought responsible for igniting grain dust and converting it into a surging mass of flames which swept the Taylor Mfg. Co., San Fernando Valley, Calif., recently. Working on a pipe in a large bin, sparks from the torches apparently ignited the initial terrific explosion. Fortunately only 2 of the 150 employees on the job at the time were seriously burned.

Help New Workers Be Careful

With the percentage of new workers increasing right along, going over the SOGES Safety Manual with them regularly should help reduce accidents and injuries. Additional copies are available at 25c each.



HARBIN HEADS U.G.A.

C. E. Harbin, well known in his long association with the Fire Underwriters' Inspection Bureau, Minneapolis, will succeed William L. Lerch as manager of the Underwriters' Grain Association, Chicago, on Aug. 1. Mr. Lerch, who has headed the group for the past 13 years, will serve as legal advisor. Mr. Harbin has been in Chicago for the past year working under Mr. Lerch.

Prior to moving, Mr. Harbin appeared on SOGES programs several times. Leonard Berg, formerly supt for Van Dusen-Harrington Co., Minneapolis, has been released by the Army and is now an inspector for this office.

"GRAIN," Board of Trade, Chicago. Published Monthly.

OUR ABILITY TO HELP WIN THE WAR

By Harold Wilber, Elevator Superintendent,
A. E. Staley Mfg. Co., Decatur, Ill., Before
Duluth S. O. G. E. S. Meeting, June 18th

SINCE we are essentially grain handlers, the natural approach to such a broad subject would be along the line of considering individual grain handling problems. Most of us are willing to forget whenever we can, the hundreds of other things expected of us including wartime maintenance, job training, personnel, etc.

Most of us have tried to solve a lot of trying problems which different lots of grain may throw at us, and may stand us up in the corner. This is, no doubt, a time to redouble our efforts, since as custodians of food for several nations, not a pound must be lost or be permitted to deteriorate if there is any way to save it or improve it for future use.



The realization that more of our food must come direct from cereals without due process of run-

ning it through animals to make the palatable meat diet, echoes the importance of the quality of the job that is expected from us.

Must Become More Vigilant Custodians

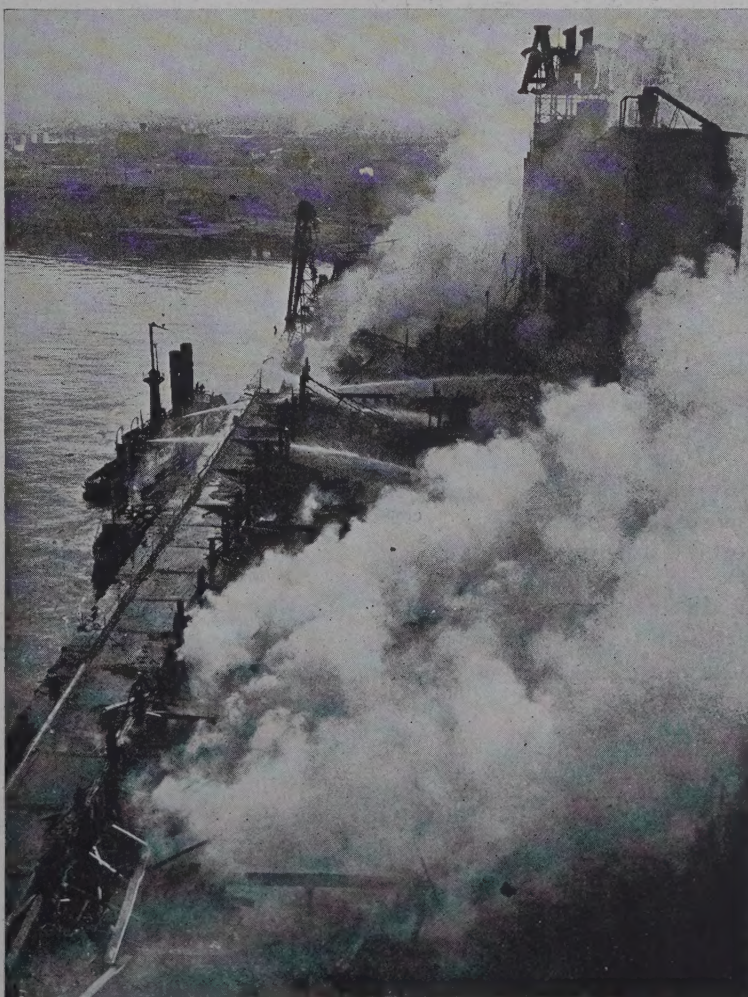
OUR job is to see that no lot of grain heats from any cause and becomes unfit for human consumption. We might also consider that food is lost even though the heating process never goes near the point of actual physical damage. Let us consider a bin of corn within which the normal metabolism process is working alongside of the life processes of the microorganisms to which it is the host. Temperatures increase during the old chicken and egg cycle. Based on the rough figures of about 5,000 Btu. in a pound of grain and a specific heat of around .5/10, a temperature rise resulting from change within the grain amounts to fuel consumed out of the grain of about a pound per thousand bushels.

4,000 Bu. Lost Per Million Bu.
Each 20° Change

IT seems safe to assume that about the same amount of loss of two pounds per thousand bushels for each ten degree temperature rise extended to actual storage conditions would indicate two thousand bushels lost in a half million bushels changing only twenty degrees. This is food lost which we need so badly. It seems time for each of us to take all of the pet means, which we have at our disposal, to counteract such deterioration, as our patriotic duty. Multiply problems such as these, find intelligent solutions and it may be that that is our part in the war effort.

MAGNITUDE OF EXPLOSION-FIRE SHOWN

Some indication of the magnitude of the Albers Brothers Milling Co.'s fire reported in our last number may be gained by a comparison with the San Francisco fireboat shown wetting down the ruins at the right. This vessel has a hull 120 ft. long. The smaller craft at the stern of the fireboat is one of the two U. S. Coast Guard fire fighting units operating at this fire. The streams from these smaller fireboats proved inadequate to cope with a conflagration of this magnitude. The concrete mill and grain tanks shown standing in the ruins was surrounded on three sides by a huge wooden grain warehouse which was 840 ft. long and 165 ft. wide.—San Francisco Chronicle photo.





BATTLE LINES *of the food front*

EVERY day our Army buys nearly three million dollars' worth of food.

Every day five million dollars' worth of food sails away on lend-lease.

And every day 126 other million Americans at home must be fed.

So it's easy to see the job that faces the farmers—and one of the jobs that face the railroads.

Food, war goods, ore, coal, oil, everything—it all adds up to a total of 1½ million tons being moved a mile every minute.

To do it the railroads are starting a loaded freight train on its run every four seconds.

They are also starting a special troop movement every six minutes of the day and night.

New equipment and needed materials are next to impossible to get. And there is a limit to the load which can be carried by the railroads with what they now have.

That's why coaches are sometimes crowded, why trains are sometimes late, why you cannot always travel as comfortably as in the past.

Like the farmers on the food front, however, the railroads are devoting every bit of their experience and initiative to provide the transportation needed to keep our battle lines strong.

AMERICAN



RAILROADS

ALL UNITED FOR VICTORY

Take one other little facet in our every day operations. One of the leading distilleries has found through considerable research that ordinary corn produces from two to three per cent less alcohol than the similar qualities of natural corn. In fact they have found that K D corn that has had poor consideration in the drying process will probably yield from four to six per cent less. Apply that loss ratio to our needs for alcohol from corn and the results run into war time figures.

Proper Drying Saves Millions

AT the same time authorities have found that corn dried under favorable conditions may actually yield more than the similar lot of natural corn. That proper consideration is tied up in intelligent grain drier operation. Maximum temperature of grain within the drier plus the proper time element can help us solve part of this loss problem. In times of plenty we did not worry a lot about the finer points of our work because it seemed a little far fetched to worry about such trifles, but in these times it may be that the accumulated trifles will win the war for us.

Hundreds of little facets come up in our workaday job. Many need a little intelligent experimentation, for instance, how many of us know just what the possibilities of storing grain by using ethylene gas one part in ten thousand of air to make grain more amenable to storage and to have more value for milling? It may be practical or it may not, but what are we doing about it or stimulating others to do for us?

It may be that the answer to the subject is for us to start using our heads more, and at the same time produce more sweat to meet these problems. We must remember that a single pound or a single handful of grain is needed by someone somewhere ever so badly.

LESS ELBOW ROOM

Commencing with this month's issue of "GRAIN" we reduce our overall page size from 9x12 to 8x11—at the request of the government. The type-page remains the same, 7x10, so all that has been lost is the attractive white margins which set off the pages so well.

With practically all publishers going to a standard size, or multiple thereof, a great deal of paper will be saved, and little, if anything, will be lost. "GRAIN" started out in 1936 as an 8½x11 publication, increased to 8½x11½, then up to 9x12 to accommodate larger cuts and to further improve its appearance.

It will doubtless be a bit confusing becoming accustomed to different proportions in these pages, but everything necessary to speed victory is a worthy sacrifice.

Stream-Lining

OUR SAFETY CAMPAIGN

By CLARENCE W. TURNING

Accident situation: Your committee feels that the present accident trend is alarming. Figures presented for the use of this meeting clearly indicate that we are riding with the tide and that we are faced with abnormal increases in our accident rates. During the contest period just closed we had large increases both in the frequency and severity rates.

Objective of your safety committee: Your chairman's report indicates that the safety committee just about attained all its objectives for the year 1942, except the one big objective—the reduction in accidents. In order to attain this chief objective in 1943 we will have to work harder than ever.

Personnel of Safety Committee: It is suggested that the safety committee to be appointed at this meeting be larger, and that full representation be given by all chapters. It may also

be desirable to include one or two representatives from the larger insurance companies covering your plants; and in the states and provinces having compulsory insurance plans you may wish to include

an inspector or two from these bodies. We need men on this committee who will take an active part in our safety work and they must be men who are in close touch with developments in safety fields.

Our educational campaign is largely over and now we must put this training into practical use. This augmented safety committee should have at least one meeting a year, and at that meeting plans should be developed whereby the chapter safety work will be featured and as much practical work as possible done for the plants in each chapter area.

Suggested activities that could be sponsored by the chapter might well include: assignment of SOGES safety speakers for industrial safety meetings sponsored by the community, or community organizations; speakers at plant meetings, and representatives to sit in with plant safety committee; help to organize safety committees in plants not now having them; inspection

tours by a committee of superintendents. Last but not least, a subcommittee of each chapter to promote interest in the SOGES safety contest.

The safety contest is of great value, but entering a safety contest is merely the initial step in a safety campaign. It is the continuous efforts put forth from day to day that really count. With an augmented safety committee, well organized to do the work within our industry, we should soon be able to report better safety records than similar industries, some of whom are consistently turning in much better records than we have been making.

Records of other groups: For instance, the eleven cereal manufacturing plants reporting to the National Safety Council in 1941 had a frequency rate of 6.16 and a severity rate of 1.31. Nine corn products

SAFETY CONTEST DIRECTOR

DULUTH, MINN., JUNE 18TH

plants had a frequency rate of 13.18 and a severity rate of 1.44; sixty milling plants had a frequency rate of 16.61 and a severity rate of 1.91. Twenty-nine grain elevators reported their record to the NSC (mostly our group) and their record was a frequency rate of 20.56 and a severity rate of 6.35. The comparison for 1942, when the figures are available, will probably show up our record as being still worse in proportion, as we had heavy increases in our accident ratio for 1942.

As others see us: The following comment appeared in the pamphlet "Accident rates in the Food Industry" for 1941: "Dairy products, grain

MORE AND MORE

THEY ARE

Turning

TO

IN-FIL-TRO-FLEX By MANY

For REPAIRING BRICK and CONCRETE

Naturally! Because Many's long years of experience, scientific principles and skilled engineering assure satisfactory results of a most enduring character.

B. J. MANY CO., INC.

30 North La Salle St., Chicago

213 State St., Detroit

Baltimore (Md.) Life Bldg.



IN-FIL-TRO-FLEX

System — a complete job of many exacting operations.

elevators, and sugar refineries had the worst records in the industry in 1941."

The injury rates of these branches of the industry were about two and three times the average for steel mills."

Best all-time safety records reported by the National Safety Council include the following: Cereal manufacturing—Kellogg Company, Battle-Creek, Michigan, 1,159,776 man hours. Milling—General Mills, Inc., Eastern Division, Buffalo, 1,101,622 man hours. We have a long ways to go before we can claim such records for our group.

"I am too busy"—is the stock reason given us for not taking an active part in the accident prevention work. If we all felt and acted that way accidents would surely increase at an even more alarming rate. It is when we are busy at the plants that accidents occur. Accident costs will be staggering if we do not do something about it. Don't say that you are "too busy" to do more safety work—such as doing your part to spread the educational work from the J. I. T. course. This has now been put out by the National Safety Council on film slides and records and will be used by us during the coming year, if enough Superintendents decide that they will take the time to put on this course.

Our chief objective remains—the reduction in our accident toll. The foregoing are just a few thoughts to help bring home to you the seriousness of the situation and a few thoughts on how you can help promote safety in your Society, in your chapter and in your plant. The rest is up to you. I hope some action will be taken at this meeting to broaden the scope of our safety efforts, to make them effective, continuous and productive of results.

SOGES SAFETY CONTEST

Number of entries from various chapters in current and last two preceding contests:

	Number of plants entered—		
	1943	1942	1941
Minneapolis	15	15	11
Non-Chapter	13	9	3
Chicago	5	6	2
Omaha	5	1	1
Fort William-Port Arthur	4	5	5
Kansas City	4	3	3
Duluth-Superior	3	3	3
Buffalo	1	1	..
Enid	1	1	..
	51	44	28

SAYS BEST YET

I do feel that the Duluth meeting was very successful, in fact, I believe that the quality of the program was the best we have ever had. It was really too bad that a larger number of members could not have been there to hear some of the worthwhile talks, papers and discussions.—Paul H. Christensen, Van Dusen-Harrington Co., Minneapolis.

Lubrication

by vincent a. shea

St. Anthony Elevator, Van Dusen-Harrington Company, Minneapolis, before Society of Grain Elevator Superintendents' Meeting at Duluth, Minnesota

MY topic could lead me into lengthy channels, but I will confine myself to the practical phase of the subject and not delve into the technical construction of lubricants.

From the time the first machine was designed, built and operated, certain metal moving parts were incorporated in the design of this mechanism which required a lubricant to act as a grease film to prevent undue wear of these moving parts, as well as to maintain their original calibration as long as possible. So you see from the extreme beginning of this present machine age, lubrication played an important part and immediately became as essential as the machine itself. True, most of these original machines were slow moving and cumbersome and these contacting moving parts—which we shall call bearings—performed their functions with the aid

of animal or vegetable fats or oils of very low film strengths and low in heat resistance.

As mechanical and electrical engineers cooperated in designing better, faster and more efficient machines out of alloys that strengthened the steel and iron construction, eliminating weight and bearing area, so also were the lubricating engineers called on to improve the oils and fats used in making lubricants.

At the time the discovery was made that more efficient lubricants could be produced from mineral oils, and this was a discovery as important as any mechanical invention, because it gave the mechanical engineer a new and broader field to work in, knowing that greater loads per square inch of bearing area could be maintained with a supporting grease film.

New Equipment Pays Profitable Dividends

TODAY we are still confronted with the economical operation of our plants. New types of machines perfected do not prompt us, but their economy forces us to buy them and remove entire batteries of still serviceable machines for these newer models—and the extra cost is soon dissipated in the time saved, less maintenance required, less spoilage of our product or a better product produced.

Do we pay equal attention to the continued advance in lubrication? Do we always keep in mind that the essential point in the lubrication of any contacting moving metal parts is the quality of the small film immediately between these moving parts, rather than the quantity these parts are submerged in or surrounded with? This extra quality and selection of the proper type of lubricants should not prompt us, but force us to secure the correct lubricants and the correct method of application for the same obvious reasons that forced us to install new machines.

Now that we have covered the definite relationship between operating equipment and lubricants, let us concentrate on the subject of this paper, "Lubrication", and how to determine our lubrication costs. We

PROMPT HANDLING NECESSARY

Prompt loading and unloading of boxcars is imperative, according to an announcement from Gilbert P. Lane, Plant Manager of Arcady Farms Milling Co., Chicago, if a serious car shortage is to be averted. "The dwindling supply of rolling stock constitutes a real threat to the grain, feed and milling interests.

"This situation is already making itself felt in the Southwest, and with the Northwest crop movement almost at hand, cars must be handled with dispatch and kept moving or a congestion will result. The government needs more and more cars to keep war supplies moving so the number available for business in general is far below normal. No company, however large or small, need look for special consideration," he pointed out.

Receive "E" Award

With a fitting program participated in by army and navy officers, the Quaker Oats Co., Cedar Rapids, was presented the Army-Navy "E" on June 18th.

The average time required to move a scrapped jalopy from an auto graveyard to a steel furnace has been reduced from 60 days to a national average of 45 days; in some parts of the country, to 24 days.

covered the importance of film strength to prevent metal wear and decrease our maintenance costs.

Cost of Applying Highest

AN important factor so often overlooked or never considered is the fact that the cost of applying lubricants is at least four times greater than the cost of the lubricant itself, varying with the quality of the lubricant and the method of lubrication. Condensing this to an actual test for a given period of time on a production unit, every application of lubricant "A" in excess of that required for lubricant "B" adds a definite amount to the real cost of lubricant "A."

Or if a system of application "A" prevents wasting a lubricant and maintains a perfect film in a bearing twice as long as in application "B", then by using the same lubricant in both types of application the cost of lubrication is lowered 50% by employing the type "A" application.

Now you could justifiably say, "This is alright in theory, but how about some concrete evidence of such a vast difference in applying a lubricant to a bearing?"

In reply to such a question, I am reminded of a pamphlet on "Lubrication" passed out by the Mill Mutual representative, describing a gravity feed cup, called Venango Gravity Feed Cup, which feeds a soft cup grease manufactured by the Keystone Lubricating Company.

Upon investigating this system further, I found some interesting facts on economical lubrication. These Venango cups will work satisfactorily at shaft speeds of 50 to 5,000 R.P.M. They are designed for use on any plain or ring oiling type bearing, cups to be mounted in an upright position or at angles no greater than 45 degrees. One Venango cup will service bearings up to 6 or 7 inches in length on shafts 3 inches in diameter or under; on larger shafts each cup will service 4 to 5 inches provided the cup is placed in the center of bearings or evenly distributed on longer bearings.

No Motion—No Greasing

ON hanger bearings, one cup is placed on each side of the hanger. These cups are provided with a spring cover always keeping the grease clean. Cups are constructed of the highest quality soft drawn steel and are screwed directly into the bearing. A soft copper rod extends through the length of the cup and rides the shaft so that when the shaft revolves the slight suction and vibration cause this specially designed grease to feed slowly and evenly down the copper rod on to the shaft and bearing. When the action of the shaft ceases the grease feed ceases and leaves a starting film on the shaft for a long period.

This system not only provides posi-

UNITED STATES TREASURY DEPARTMENT



For distinguished services rendered in behalf of the War Savings Program, this citation is awarded to

Grain

Given under my hand and seal on

June 9, 1943

Henry Morgenthau Jr.
SECRETARY OF THE TREASURY

"GRAIN" CITED

"It gives me great pleasure to transmit to you the enclosed citation," writes Thomas H. Lane, Chief, War Savings Staff, U. S. Treasury Department, Washington, D. C., "signed by the Secretary of the Treasury, in recognition of the outstanding service rendered by your publication to the War Bond campaign."

[Thank you, Mr. Lane. We consider it our duty, as well as an obligation to our readers to try to do an outstanding piece of work on every score—particularly War Bonds.]

tive, safe, and clean lubrication, but it is also most economical. As an example, one or two cups on a bearing, each containing 3 ounces of grease, will serve the bearing of a 2-7/16 inch shaft revolving at 260 R.P.M. for at least three months, without replenishment, and installations run upwards of six months. All this time no attention is necessary.

It is a well known fact that a large percentage of oil applied to a bearing is wasted through drippage. Only a remarkably small amount of lubricant is actually required to properly serve the bearing. The Venango system eliminates this waste—thus the economy, thus the cleanliness. Further, this Venango system, by eliminating drippage, eliminates slipping and fire hazards, and for this reason the Mutual Fire Prevention Bureau is primarily interested in this system and publishes a description of this Venango cup-Keystone grease combination.

Now if such economies can be realized by the employment of a simple, safe and inexpensive type of lubricator, no doubt there are other devices to control the excessive use of lubricants, for it is a known fact that certain lubricants are designed for particular applications and will render far better service if used in their proper places. Too many of us are prone to believe that oils are oils and greases are greases, and leave the selection of types and applications to

men in our employ who are not properly trained to determine the difference in lubricants or the amounts necessary to serve a bearing.

Plant Operation Costs Involved

AN ENGINEER once told me that if some of the plant managers could take a trip into some of the mining towns located in distant points from any metropolitan center, where equipment must be kept in operation every day and repairs and replacements are of necessity kept at a minimum, they would learn how essential proper lubrication really is and what an important part pre-determined tests of lubricants play in the cost of plant operation.

In such tests incidental benefits which are directly affected by the character of the lubricant employed are measured to the nth degree. Each additional degree of operating temperature reduced determines a certain amount of power consumption saved; this multiplied by the number of bearings employed may alone amount to the entire cost of lubrication or at least more than pay for the difference in the cost of two lubricants.

We can be thankful that our plants are located in the land of the free, in the land where "a man is still a man for a' that," but it would behoove us all well to devote a little more time and attention to our lubricating problems and lubrication in general.

PREFERRED!



SUPERINTENDENT WILLIAM H. GASSLER SAYS:

"As far as we can determine at this time, the workmanship and materials used on our Calumet Elevator last summer have proven quite satisfactory."

Caulking operations are shown in the center view; at the left the walls are being prepared for our elastic *Surfacite*—which is shown being applied in the view on the right.

Surfacite *Waterproofing*



... Preferred because all disintegration and cracks are repaired with GUNITE, which is stronger than concrete, is hard, dense, waterproof with perfect bond to the old concrete.

... Preferred because then all surfaces are covered with the soft, elastic material—SURFACITE—many times the thickness of ordinary waterproofing.

... Preferred because SURFACITE compensates for movement by a tough elastic hide and with a long-life flexible material bonded to the concrete.

You, too, will PREFER our services after we have gone over your problems, submitted facts, ideas and costs.

JOHN D. BOLTON -- GUNITE CONTRACTOR

20 NORTH WACKER DRIVE

CHICAGO, ILLINOIS

THE SOYBEAN



Leading scientists and research men of the country say that the soybean will have an effect on your life and mine.

How will it affect us? We will live a healthier life in that the soybean is going to play a very important part in the foods that we consume every day—because the soybean is very high in food value, is high in protein, and contains almost all of the essential and necessary vitamins.

We, as managers and superintendents of terminal grain elevators and processing plants, are processing, storing, and controlling a large part of each crop. In view of this, the manner in which we handle the bean will have an effect upon the quality of the product that we will use and consume.

Answer to Meatless Meals

BRIEFLY let us look at the chemical make-up of the soybean. The soybean in itself contains, on the average, approximately 35% protein, 4½% fiber, 19% oil, and 12% moisture. After the soybean has been processed into edible flour or grit it contains 52% protein, 7% fat, and 5% moisture. As you can see, the protein content of the processed soybean is exceptionally high. The soybean also contains vitamins A, B, B₂, and many others.

Other grains are high in some vitamins but none carries as many as the soybean. Also, no other grain is as high in protein content. As an example, we can buy a pound of soy flour or grit for 20c which contains ½ pound of protein. If we buy a pound of meat at 50c a pound it only contains 1/5 pound of protein. The high protein content of the bean, which is high in digestibility, makes it excellent as a food.

Getting into the history of the soybean, we know that the bean was grown in China as far back as 2800 B.C., and also at that time it was used as a food. But it was not until 1915 to 1925 that the processing of the soybean by the hydraulic press and the expeller method was carried on in this country. Even then it was on a very small scale. In 1929 we had a crop of nine million bushels. In 1939 we had a crop of ninety-one million bushels. In 1942 the crop we are handling at the present time, it is

Careful Analysis Before Unloading Often Reveals Excessive Damage and Discoloration, Disqualifying Beans for Premium Use. Handling in Elevator Is Based Upon "Lab" Findings

By Emil A. Buelens

Production Superintendent, The Glidden Co., Chicago

estimated, will be two hundred million bushels. Growth of the soybean has been very rapid, and from all indications it will continue to be so.

Large scale processing production of the soybean started in 1934. The leaders in the field were A. E. Staley Co., Archer-Daniels Midland Co., Central Soya Co., Spencer Kellogg & Sons, The Glidden Co. and many others. The solvent processing of the soybean was started on a large scale in 1934. At the present time solvent plants process approximately 25% to 30% of the total crop and the balance is processed by the hydraulic expeller press method.

The yellow soybean is used—not the green or brown type of bean—because the oil content of the yellow soybean will range from 18% to 20% while in the other types of beans the oil content is as low as 14% to 15%. The most prominent varieties of yellow beans are the Illini, Manchou, and Dunfield. Illinois, Indiana, Ohio, and Iowa are the leading states in the producing of the soybean.

Careful Analysis Before Unloading

THE handling of the soybean in the elevator has not given us much of a problem. Generally, it should be handled the same as we handle other types of grains, although most processors, before a car of soybeans is unloaded, get a complete analysis of the car. From this analysis is determined whether or not a car should be used to produce edible products. The amount of damage, splits, and foreign material have a definite effect upon the quality of the flour or grit produced.

We will take the state inspection, which, for example, would show damage of 5%. In our grading of this same carload we might find the damage as high as 15%. In determining the percent of damage in the beans we will take the bean and grind it so that we can actually see whether the meat of the bean has been discolored in any way. If we find that this

meat has been damaged or is spotty (which would show up as damage after processing) this particular carload of beans is not used for edible products. Generally speaking, as far as the processor is concerned, other than separating his beans for safe storage, he will make but two distinctions between beans—those which are used for edible purposes and those which are used for meal production.

Let us briefly look at the methods used in processing the soybean. In the expeller process, in which beans are processed by the continuous press method, as a rule but two products are made from the soybean—the oil, which is used for edible purposes and paints, and from the oil lecithin is removed, which is used as a preservative for wood when mixed with creosote. In addition to the oil the meal produced is used principally for cattle feeding. As an average, I would say that the yield of oil from the expeller



—Food Industries
"Maybe we did put too many vitamins into it!"

method is 14% to 15% and the percent of oil left in the meal will range from 4% to 5%.

Protein Being Extracted, Utilized

2 In the solvent extraction process the bean, after it has been ground and flaked to a thickness of approximately 7/1000 of an inch, is put through an extraction column and the oil is washed out by a countercurrent flow of solvent. With the solvent extraction method the yield of oil can be expected to be 17% to 17½%. The percent of oil left in this type of meal, on an average, will be slightly under 1%.

From the oil which has been removed by the solvent process lecithin is also extracted. The lecithin which has been extracted from this oil also is used in wood preservatives, and can be further refined and used in chocolates, etc. The purpose of using lecithin in chocolates is that it will keep the chocolate fresh.

Due to a larger amount of oil being extracted by the solvent method, the percent of protein in the meal will run from 2% to 3% more than in meal which has been processed by the press or expeller method. From the meal which has been produced by the solvent method protein also is being extracted. The Glidden Company has been the leader in this field and for the past nine years has done a considerable amount of research along these lines. Protein is being used

principally today in linoleums, the paper sizing industry for coatings, in artificial leathers, and in paints.

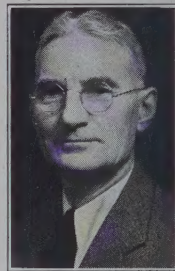
3 In the edible process, as mentioned before, only the highest quality bean is used. First it is ground, dehulled, degerminated and debittered. Then the bean is processed by the expeller method. About 12% of the oil is removed, leaving a balance of 6% to 7% of oil in the cake. This cake is then sized to whatever size grit is wanted or is ground to a fineness which is about on a par with wheat flour.

Edible flours and grist today are being used in a number of the foods that we are eating every day. Germany, for quite a number of years, has been feeding a high percentage of the bean to its army. They claim that the results are exceptionally good. Soya flour and grits are being used by our own army today. They have found that the food value is very high.

I believe that we have only scratched the surface on the possibilities of using the soybean in foods, and that the day will come when it will play a very important part in the foods we eat and the items that we use. You men who, in one way or another, will be responsible for the handling and processing of the present and future crops of soybeans will definitely have an effect upon the quality of the products produced from the bean.

HENRY KEIR DIES

HENRY KEIR, Super at the Wabash elevator in Chicago since 1921, died rather unexpectedly, following an operation, on July 6th—just five days before his 68th birthday. Long active in SOGES activities until declining health and changes in circumstances forced his withdrawal, Henry served several terms as president of the Chicago Chapter, and likewise as a director of the national body. During his regime attendance and interest were always at a peak, for he was a natural born leader, a clear thinker, and enjoyed a host of admiring friends.



Born in Braidwood, Ill., Mr. Keir started his association with the grain business at the Michigan Central elevator in Chicago about 1899. In July of 1901 he transferred his unloading activities to the Wabash. Between that time and 1907 or 1908 he successively held all positions in the house. Foreman from then until 1921, when he became Super, Henry remained at the Wabash under many changes in management—the last two being Bartlett-Frazier and Norris Grain companies.

Surviving are his widow (his boyhood sweetheart from Braidwood, too) and five sons, one of whom was formerly his assistant, but who now is safety director at one of the large defense plants in Chicago. To say that Henry's wise counsel and friendly interest in all matters will be missed by all who knew him would be saying the least due him, for he was most unusual.

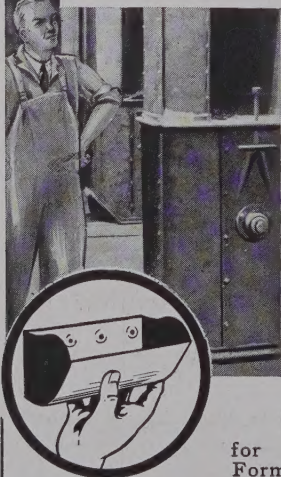
THE HOME FRONT

Our soldiers are fighting our battles In most every tropic and clime. OUR job is to send food, munitions And see that they get there on time. Sure! It's tough to keep plants a'running With materials and labor so short, But we MUST prevent fires and shut-downs Or supplies will not even reach port.

So though you are having your troubles To keep the "old plant" in repair; And you curse the insurance inspector And you're ready to quit in despair, Just remember the boys in the Jungle Fighting the Jap and the Hun. Do you think for a minute they're saying, "I'm quitting, it can't be done?"

—L. P. Dendel, Michigan Millers Mutual Fire Insurance Co.

Are You Thinking of INCREASING The Size of Your Bucket Elevator Legs?



Size alone won't solve your capacity problems, because it's the bucket efficiency that really counts.

Some operators thought speeding up the belt would give them greater capacity. Increased belt speeds are not always the answer to greater capacity because excessive speeds cause undue wear on equipment and reduce carrying efficiency of the buckets.

We have demonstrated this time and time again to both country and terminal elevator operators. "NU-HY" Buckets permit closest possible spacing . . . and are guaranteed to operate at a wide range of belt speeds with uniform carrying efficiency. They are the answer in every case.

Your present elevator legs can definitely be improved by installing "Nu-Hy's." Write for Capacity Analysis Form No. 76 and through our recommendations be prepared to handle the volume available with your present legs.



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TRADE MARK REGD. PRODUCTS U. S. PAT. OFFICE

LITTLE HONORABLE PLANT

From "A Line O' Type or Two," Chicago Tribune
The much-mentioned soy bean has at last aroused the nonagricultural curiosity of this column. The talk that comes out of chemical laboratories almost persuades us that this oriental legume with the homely name contains one of the keys to the riddle of the universe. Therefore we present a few jottings for an outline of its history.

* * *

2838 B. C.—The Chinese emperor Shen-Nung described it in a medical treatise and assigned to it 300 pharmaceutical properties. He called it "Little Honorable Plant."

* * *

1804.—A ship captain or a missionary brought a small lot of the beans to the United States. They were planted chiefly in a few acres of North Carolina, and seem to have been regarded merely as a garden curiosity for the next 50 years.

* * *

1854.—Commodore Perry opened a Pandora's box of trouble called Japan and brought back, among other things, a supply of soy beans, which were handed out to the citizens, in a casual way, by the commissioner of patents. No excitement ensued.

* * *

1907.—The department of agriculture began to boost the soy bean, and W. J. Morse, a farmer's son with a Cornell degree, was selected to adapt it to American soil.

* * *

1917.—The total acreage of soy beans in the United States was 500,000. In 1922 the Staley Manufacturing company of Decatur, Ill., added a soy bean processing mill to its corn products plant. This was largely due to the fact that Mr. Staley was a diabetic and could not eat starch. . . . Note that the Staley firm also produced George Halas, who produced the Chicago Bears. Question: Does he attribute their success to a soy bean diet?

* * *

1935.—5,000,000 acres gave 40,000,000 bushels of soy beans. About one-half the crop came from Illinois.

* * *

1939.—In March the soy bean became the highest priced commodity, per bushel, sold on the Chicago Board of Trade.

* * *

1943.—Mme. Chiang Kai-shek spoke before congress. She said nothing about soy beans, but she may have been named after them. In Pekingese the soy bean is "chiang-yu." In Japanese it is "shoyu."

No More Wooden Bins For Farms

No additional wooden bins will be purchased this year by CCC unless unforeseen circumstances change present conditions. Last year 79,000 bins of from 660 to 3,000 bus. capacity—an aggregate of 155 million bus.—were purchased.

From Wheat To Tires

Wheat will contribute to the manufacture of synthetic rubber tires after the war, states S. L. Fisher, grain buyer for Schenley Distillers Corp., Cincinnati. Alcohol from wheat is used in manufacturing butadiene. Distilleries will produce 500,000,000 gals. of industrial alcohol for war purposes this year.

BEWARE OF BAD FUMIGANTS

CCC has advised a number of association secretaries that some fumigants being used at the present time apparently have a kerosene base and the odor of the fumigant does not leave the grain even after exposure to the air for several days. State and federal grain inspectors grade wheat containing this odor as "sample grade" account objectionable foreign odor. It has been found that the use of some bin sprays cause lingering odors which permeate the grain that is later placed in the bins. No savings is effected in using such products, it is said.

New

CONVENIENT AND
MORE ECONOMICAL

Method
OF FUMIGATING SHALLOW BINS
(grain 25-30 feet in depth)

No Turning Needed

Larvacide
MIX

CHLORPICRIN-CARBON TETRACHLORIDE

PENETRATING, EASY TO APPLY, NON-COMBUSTIBLE, NON-EXPLOSIVE . . .
AND HAS INSEPARABLE GAS WARNING

Applied by hosing or sprinkling onto grain surface. The LARVACIDE sinks into the grain mass, quickly changing from liquid form to gas, to kill insect life in all its stages.

Toxic to all insect life, including Granary Weevil, Rice Weevil, Lesser Grain Borer, Saw-Toothed Grain Beetle, Flat Grain Beetle, Mediterranean Flour Moth and Grain Mites.

Also toxic and repellent to Rats and Mice.

THE COST IS LOW—**For Corn** in good condition: only \$2.60-2.75 per thousand bushels.

For Wheat: Slightly more.

LARVACIDE 15-MIX is put up in 50 Gallon Drums and must not be confused with straight LARVACIDE.

WHERE GRAIN CAN BE TURNED—use straight LARVACIDE, applied into grain stream, for best and most economical results.

INNIS, SPEIDEN & COMPANY

Established 1816

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CHICAGO • CLEVELAND • CINCINNATI
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STOPPED IN ITS TRACKS!

When a dust explosion starts in an elevator leg (where dust explosions have a habit of starting), Robertson Safety Ventilator "STOPS IT IN ITS TRACKS"—keeps it from r-u-n-n-i-n-g w-i-l-d by ushering it OUT through the Robertson Vent.

Destructive secondary blasts are definitely eliminated—and the possibility of primary explosions minimized by Robertson Safety Ventilator gravity action which continuously vents fine dust from your elevator legs.

Be on the SAFE side with Robertson Safety Ventilators. Descriptive literature upon request.

H. H. ROBERTSON CO.

FARMERS BANK BUILDING

PITTSBURGH, PA.

CARLOADINGS CONTINUE UP

As though to make the deepest and broadest "V" on the 6-yr. chart of weekly freight movements, carloadings of all commodities crashed the week ending June 5 from about 855,000 cars the week before down to 655,000 cars, only to recover the following week to 860,000. Since then the fluctuations have been more violent than in previous years. After sinking from near the 1930 high peak, this year's loadings slumped through the 1941 and 1942 levels to the 1940 low.

Grain movement has forged ahead steadily, however, as shown by carloadings for the weeks ending:

	1943	1942	1941
July 17	62,504	51,606	61,396
July 10	54,809	53,509	62,695
July 3	60,479	42,342	50,921
June 26	55,610	44,066	52,931
June 19	49,708	38,946	46,574

Cumulative loadings for the first 29 weeks were 1,388,362 in '43, 1,123,477 in '42, and 1,078,272 in '41.

CORN MOVING TO INDUSTRIES

Under the emergency program announced June 30th, more than 6,000,000 bu. corn were purchased since July 1 to make more corn available to war industries, of which 3,330,000 bu. was shipped through the special WFA marketing program—which continues through Aug. 10. It is estimated that there are more than 800 million bu. corn on farms.

CORN GRIND SLUMPS

Only 8,735,981 bu corn were ground for domestic consumption during June by the 11 refiners. This compared with 10,106,906 bu the previous month and 9,767,762 a year ago.

SOYBEAN COMMITTEE DISCUSS TRANSPORTATION

PROBLEMS relating to the transportation difficulties experienced were discussed at the recent meeting of the Soybean Processors Industry Advisory Committee of the Food Distribution Administration, the USDA reports.

The committee recommended a thorough examination of tank cars for leaks and dirt before shipping "emties" to crushing mills. It was further suggested that the use of the quickest routes and the prompt unloading of full tanks by receivers would relieve the shortage of cars necessary for the transportation of oil.

Special task committees were appointed to work on such industry matters as determining the discounts for off-grade oil from field damaged beans and a survey of the industry's requirements of hexane and other petroleum derivatives used in the solvent extraction of soybean oil. Also dis-

BIG WHEAT ORDER

Some 9½ million bu. of U. S. and Canadian grain will move down the Great Lakes during August, predicts the CCC. This amount falls short by 4½ million of meeting the monthly domestic requirements of the East. July movements are expected to total 14½ million. With 50 million bu. expected to be moved since navigation opened to the end of August, 85 million remain to move before the close of navigation to meet the CCC quota. The American carrier quota is 135 million and Canadian quota 19 million for a 154 million total.

TO CRAM BOTTOMS

Great Lakes movement of 135,000,000 bu. of grain—an increase of 25,000,000 over last year—is the WPB shipping goal set for this year. ODT broadened its control over movements of lake vessels by placing all lakes' cargo ships under a permit system in an effort to meet shipping requirements.

WHEAT GRIND SINKS

During May, 1,022 mills ground 35,482,034 bu wheat compared with 40,667,699 bu ground by 1,026 mills the previous month, 49,958,636 bu ground by 1,061 mills in January, and 36,141,421 bu by 1,093 mills in May, 1942. Over 82% was ground by 183 mills of 901 bbls and over.

Harvest Equipment to Canada

Custom combine and other wheat harvesting and threshing equipment operators will be permitted to cross the international border to expedite the wheat harvest in the two countries, according to a reciprocal agreement between U. S. and Canada.

cussed was a program looking toward obtaining maximum oil from the 1943 crop.

Members of the Soybean Processors Advisory Committee include F. J. Bunnell, Central Soya Co., Chicago; H. E. Carpenter, Berea Milling Co., Berea, Ohio; J. B. DeHaven, Allied Mills, Inc., Chicago; Roger Drackett, Drackett Products Co., Cincinnati; Philip Duff, Archer-Daniels-Midland Co., Minneapolis; E. D. Funk, Jr., Funk Bros. Seed Co., Bloomington, Ill.; Porter Jarvis, Swift & Co., Chicago; E. J. Johnson, Ralston Purina Co., St. Louis; H. Kellogg, Jr., Spencer Kellogg and Sons, Buffalo; S. D. Ornsby, Oswego Soy Products Co., Oswego, N. Y.; E. K. Scheiter, A. E. Staley Manufacturing Co., Decatur, Ill.; H. R. Schultz, Standard Soybean Mills, Centerville, Iowa; Chas. J. Simmons, Plymouth Processing Mills, Fort Dodge, Iowa, and P. E. Sprague, The Glidden Co., Cleveland.

ARGENTINA TO BURN WHEAT

Suspending guaranteed minimum prices to producers of 1942-43 crop wheat and flaxseed effective Aug. 15, current crop plantings were to have been reduced 10% as a part of the price program; however this reduction was cancelled. The government authorized the Grain Board to sell up to 73,480,000 bu old crop wheat still in its possession for fuel at 36c per bu. During the last two years large quantities of corn were used for fuel purposes. From 1 to 2 million tons of flaxseed will be added to the fuel supply.

FEED CRISIS NEAR

Because there is no possible way of fulfilling the many commitments this country has made to its consumers, farmers, and allies, the government's food policy is "insolvent," J. A. McConnell of Ithaca, N. Y., general manager of G.L.F. and chairman of the Feed Industry Council, told the International Baby Chick Ass'n this month. After 3 yrs of supplying food for the war, the U. S. has failed to arrive at a workable food policy.

"Optimistic government press releases and carefully worded, non-alarmist statements of government officials to the effect that there will be plenty of food for all do not disclose the abyss which this country is approaching," he pointed out, in predicting a "desperate" shortage of feed.

"If Canada were foolish enough to sell the U. S. its apparent grain surplus, this grain would be sufficient to extend our present live stock spree only about 30 days. It is my prediction that about next March the real underlying feed shortage, which is now in the making, will be so great that there will be no way to squirm out of it except through liquidation of all classes of animals on a vast scale." Changes in import regulations to permit imports of South American corn and protein concentrates to help relieve the feed shortage, increased fish meal supplies, and higher priority ratings for equipment were called for in resolutions adopted.

Cereal Industry To Expand 20%

Major problems facing the cereal industry in planning for a suggested 15 to 20% expansion program for 1944 were discussed at a meeting June 8 of the Breakfast Cereals Industry Advisory Committee. More and more dependence is being placed on grain products as a means of stretching available protein supplies and providing proper nutrition. A substantial percentage of soya products for fortification will be blended in cereal concentrates produced for export.

Effective IN DESIGN ... Economical IN OPERATION

The DAY DUST CONTROL SYSTEM

Write for Information

The DAY Co.

2938 Pillsbury Ave., Minneapolis, Minn.

YOUTH'S HONESTY

Dad: "Son, I never knew what it was to kiss a girl until I courted your mother. I wonder whether you will be able to say the same to your children."

Son: "I think so Dad, but not with such a straight face as yours."

10 HEALTH RULES

Mr. T. A. Erickson of the General Foods Corp., speaking before a meeting of the Rotary Club, Indianapolis, mentioned ten very interesting health rules. Thought you might be interested, so here they are:

1. Eat less, chew more.
2. Clothe less, bathe more.
3. Talk less, think more.
4. Idle less, play more.
5. Go less, sleep more.
6. Ride less, walk more.
7. Waste less, give more.
8. Scold less, praise more.
9. Worry less, laugh more.
10. Preach less, practice more.

LIFE BEGINS EACH MORNING

Whether one is 20, 40, or 60; whether one has succeeded, failed, or just muddled along; whether yesterday was full of sun or storm, or one of those dull days with no weather at all, Life Begins Each Morning!

Each night of life is a well between today and the past. Each morning is the open door to a new world—new vistas, new aims, new tryings.—*Leigh Mitchell Hodges.*

A SOURCE OF EXTRA LABOR

News from Britain tells us that a good deal of extra labor has been obtained in that country by making it possible for business men to put in two or three hours' work several evenings a week in munition and other industries without pay. Many British housewives, too, it is recorded, perform similar work. It is stated that the practice is spreading widely in Britain.

If this is being done in Britain, why cannot it be done in Canada? There are thousands of business men who leave their offices in the early afternoon, and who would be glad to copy the example of the British business men, and enjoy a little needed physical exercise in a patriotic manner. Many Canadian housewives, too, have some leisure time which they would no doubt be delighted to utilize in the service of their country.—(*Searle Grain Company, Ltd.*)

More Bags Available

More burlap bags are allowed by WPB for shipping grain, processed feed and seed, and under an amendment effective June 11, flour may now be packed in new burlap bags. The percentage of bags hereafter allowed, based upon the number used in 1941, are: grain and seed—70% (an increase from 50%); processed feed—100% (an increase from 50%), and flour—100% (an increase from 0%).

CUT ABSENTEES BY MOCK TRIAL

The mock trial of Adolph Hinder, conducted by a Chicago processor in a campaign against absenteeism, has proven so successful the past 30 days that employee absences are now confined almost entirely to personal illness. "Legislation is not necessary to cure absenteeism and tardiness," observes the Superintendent. "Intensive unrelaxing effort and co-operation between labor and management will overcome this difficulty." Every case of absenteeism is individually investigated by department foremen and if questionable is passed upon by a committee of fellow workers.

WHAT, AGAIN?

First Recruit: "I feel like punching the sergeant major in the nose again."

Second Recruit: "Again?"

First Recruit: "Yes. I felt like it yesterday."

SOUNDS LOGICAL

A lot of fellows who spout so profusely about capital and labor never had any capital and never did any labor.

GOOD ADVICE

Don't give up the ship—and keep down everything else you can.

WPB L-292 AMENDED

As we go to press word comes that WPB order L-292 has been amended. This order limited production of food processing machinery. Recommendations for allotments of critical materials for food processing machinery are being considered now by the Office of Materials & Facilities of the WFA, for the past quarter of 1943.

As amended, the food processing machinery may not be offered, nor the order accepted, unless same is an approved order. Manufacture is restricted of certain types of processing machinery enumerated; also a delay in delivery can be anticipated inasmuch as a "schedule" of supplies must be set up by purveyors in WFA and approved by WPB before the manufacturer can make and distribute such machinery. An "approved order" must bear a preference rating of at least AA-3 assigned on Form WPB 617 (formerly PD-200), PD-1A, or WPB-837.

WFA TO HANDLE PRIORITIES

The Priorities Service Group of Commodity Credit Corp., which was the agency given the assignment, has been transferred to the War Food Administration. It now appears that CCC will have no direct responsibility in connection with the consideration of priority applications but that all food cases—including those which relate to grain storage—will be handled by the Priorities Division of the War Food Administration.—C. D. Sturtevant, Special Representative, C.C.C. Chicago.

Educational and Helpful

I have been a reader of "GRAIN" Magazine for several years, and have always found it very educational and helpful. Would like to know if I may order it sent to my home at the same price as we received it through the company. — Herman Huskisson, Owensboro, Ky.

BUY U. S. WAR BONDS AND STAMPS

RETURNING COMBATANTS AVAILABLE

With combat-disabled members of the armed forces returning home in steadily increasing numbers, and the list of those honorably discharged for other reasons rapidly lengthening, the War Manpower Commission states: "Full and effective utilization of returning veterans through re-employment, rehabilitation, training and selective placement is the National's responsibility and privilege." Quite a number have already gone to work in grain handling and processing plants.

VIOLATORS TO BE PROSECUTED

The War Manpower Commission calls attention to Reg. No. 4 forbidding industrial workers from transferring to other jobs at higher pay unless the shift is in the interest of the war program. Workers can shift from a non-essential industry to an essential industry without regard to pay rates or government authority, generally speaking. A fine of \$1,000 and/or a year in jail is provided for violations by employer and employee.

EMPLOY AMERICAN-ASIATICS

Accepting the offer of the labor division of the USDA, the Central Soya Co., Decatur, Ill., will employ approximately fifty American-born Asiatics (reported as Chinese) as common laborers in the McMillan feed plant.

REVIEW YOUR SET-UP

In view of the pending draft of fathers 18 to 37 years old, suggests Steve Halac of The Glidden Co., Chicago, it would be well for all readers of "GRAIN" to get out their May number and comb through the story on the "manning" table again. While fathers who are "key men" in agricultural or essential industry will be deferred, nevertheless Mr. Halac points out the advisability of following recommendations referred to. Only about 1,500,000 industrial deferments will be permitted, whereas 3,000,000 men now deferred for occupational reasons will be inducted.

Ruth Lane Marries

Ruth Mary Lane, elder daughter of Mr. and Mrs. Gilbert P. Lane of Chicago, and Top Sergeant Robert D. Henderson, Army Air Corps Cadet School, Whittenberg College, Springfield, Ohio, were married on July 24th in the latter city. The bride and groom are well known to Chicago Supers, having participated in numerous SOGES functions. Bob was promptly shipped out to California for advanced flying training. Mr. Lane, as our readers know, is plant manager of the Arcady Farms Milling Co.

Welcome Visitors This Month

Welcome visitors this month included Harold Wilber, A. E. Staley Mfg. Co., Decatur, Ill.; Paul Christensen, Van Dusen-Harrington Co., Minneapolis; Frank Blodgett, Weevil-Cide Co., Kansas City, Mo., and Jim Auld, Hales & Hunter Co., St. Louis Park, Minn.

A. C. Rynders Dies

Albert C. Rynders, long owner and manager of the widespread ramifications of the White Star Co., Wichita, Kan., died after an extended illness on July 6th, according to an announcement from W. L. Converse, Sec'y.

DEMAND
CALUMET
SUPER CAPACITY
ELEVATOR CUPS

WRITE FOR GUARANTEED PROPOSAL TO
INCREASE CAPACITY AND EFFICIENCY
OF YOUR ELEVATOR LEG—CIRCULAR 35

B. I. WELLER CO.
327 SO. LA SALLE ST.—CHICAGO, ILL.
SOLE MANUFACTURERS

The STEINLITE Moisture Tester is FAST

Yes...an accurate moisture test on grain can be made with a Steinlite in 1 minute. Numerous experienced operators do it regularly...weigh the sample, pour it in the hopper, press a button and get a correct reading. Of course, a less experienced operator may take a little longer. But even if it takes 2 or 3 minutes...

that's a tremendous saving, compared with 30 minutes or more required by old fashioned methods.

The Steinlite is calibrated against official Government oven method. Operates on radio frequency impedance principle. Over 3,000 in use. Sold on 10 day free trial; no deposit; early shipments. Write for bulletin.

"Headquarters" for scales, triers, sieves
...all grain and seed testing equipment.

STEINLITE . . .
one minute
moisture
tester



SEEDBURO
EQUIPMENT COMPANY

ANNUAL SEED TRADE
REPORTING BUREAU
FOUNDED 1912

636 BROOKS BUILDING — — CHICAGO, ILLINOIS

Say



GOOD BY FOREVER TO BUG-A-BOO OF INSECT INVESTATION

Bugs! Bugs! Billions of them! How they get into your hair, figuratively speaking, of course.

But take heart for you can doff your hat and wave a hearty farewell forever to the horrors and hazards of the squirming, crawling, eating, heating pests that habitually haunt your grain bins.

And that's no flimsy promise . . . no "pot of gold at the end of a rainbow" ray of fleeting hope, but a statement of fact founded on the experience of three to one in the grain industry who use Weevil-Cide, the dependable grain fumigant.

Weevil-Cide would not be the popular choice if it did not give uniform and satisfactory results. Practical elevator men are not using Weevil-Cide for the mere fun of it, or because they like the color of the Weevil-Cide label, but because they have found it reliable . . . highly effective in killing power . . . leaves no odor . . . safe, harmless to grain and user . . . convenient to apply . . . and most economical in unit cost per bushel.

Why not write today for full details on saying "Goodbye Forever to the Bug-a-boo of Insect Infestation?"



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The Grain
Industry

THE *Weevil-Cide*
THE DEPENDABLE GRAIN FUMIGANT COMPANY

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